Press release

2.5 million euros for five research teams from Bavaria

Start-up competition m^4 Award announces winners

The winning teams of the m4 Award 2023 at the award ceremony on October 24 in the Munich Residence. © BioM / Michael Woelke

- 2.5 million euros funding for innovative projects in biomedicine

- The research projects address the topics: Hepatitis-B, rheumatoid arthritis, urinary tract infections, success-optimized in vitro fertilization and bio-printers for human tissue models.

- Director General Dr. Sabine Jarothe praised the award winners as visionaries and Bavaria's future entrepreneurs.

- 15 spin-offs have so far emerged from the Bavarian pre-founding competition.

Munich/Martinsried, October 25, 2023 - The five winners of this year's m^4 Award pre-founding competition have been announced. Each winning team will receive 500,000 euros for their project to solve

urgent medical challenges. The award was announced by Bio^M together with the Bavarian State Ministry of Economic Affairs, Regional Development and Energy on October 24, 2023 at the Munich Residence.

The winning teams convinced the jury with their outstanding biomedical research projects and prevailed among 31 excellent applications from research institutions throughout Bavaria.

For example, TherVacB from Helmholtz Munich is developing a therapeutic vaccine against hepatitis B, an infectious disease that kills more than 800,000 people worldwide every year.

TUBiRA is also conducting research at Helmholtz Munich. The project influences certain immune cell signals in order to develop therapeutics against rheumatoid arthritis, a disease that has so far been difficult to treat.

BugSense from the Technical University of Munich has established a paper-based test with automatable image analysis for the rapid and reliable diagnosis of urinary tract infections. The test is designed to speed up treatment decisions and simplify patient logistics.

Researchers from the University of the Bundeswehr Munich have developed a high-resolution microscope that enables the detection of living cells such as particularly vital sperm. This allows in vitro fertilization to be optimized for success.

At Friedrich-Alexander-Universität Erlangen-Nürnberg, RevoBITs has constructed the first smart bio-printer to produce human tissue models. This could reduce animal testing in medical research and the pharmaceutical industry.

With prize money totalling 2.5 million euros, the competition supports the further development and validation of the respective project idea in preparation for a spin-off. In the process, the scientists not only receive financial support, but also active guidance from Bio^M and other partners as well as industry experts.

Prof. Ralf Huss, Managing Director of Bio^M, hosted the event and handed out the awards together with Dr. Sabine Jarothe, Director General at the Bavarian Ministry of Economic Affairs. He was enthusiastic about the innovative projects of the winning teams: "With 15 spin-offs to date, the m^4 Award is a real success story. This year's winning projects demonstrate once again the impressive potential of medical research here in Bavaria." Dr. Petra Burgstaller, responsible at Bio^M for coordinating the m^4 Award added: "We are very happy with the winning teams and will continue to support them with all our efforts on their way to becoming a successful biotech company."

The momentum that winning the m^4 Award can have on a start-up's success was explained in an interview with Dr. Jonas Helma-Smets, CSO and co-founder of Tubulis: "Winning the m^4 Award was a decisive milestone on our way to making Tubulis what it is today. This award, and the 500,000 euros in funding that came with it, has allowed us to move forward with our novel research approaches to treat

cancer. Today, with a 60 million euros series B funding behind us, we are more motivated than ever and grateful for the support we have received on this exciting journey."

Bavaria's Secretary of State for Economic Affairs Roland Weigert on the prestigious competition: "The m^4 Award is a distinction for outstanding academic research groups that have the courage to put scientific findings into practice. In this way, we create the necessary conditions for Bavaria to further establish itself as a leading biotechnology location in research, innovation and entrepreneurship."

At the award ceremony, Prof. Ralf Huss also introduced the new Bio^M incubator MAxL (Munich Accelerator Life Sciences & Medicine). MAxL offers selected start-up teams from the life sciences and healthtech sectors high-end infrastructure, a customized incubation and coaching program, and access to the extensive Bio^M network.

With the m^4 Award, initiated in 2011 by Bio^M, the network organization of the biotechnology industry in Munich and Bavaria, the Free State of Bavaria promotes innovative products, technologies or services of young companies that decisively advance the further development of medicine of the future. The prize is awarded every two years, and 15 spin-offs have been realized since then.

The winners of the m^4 Award 2023 with short profiles of the projects

Tülay Aydin
Rahmetullah Varol
Dr. Dirk Stauder
Stephanie Wißmann
Dr. Dimitra Makri

University of the Bundeswehr Munich

BIOspire - Lensfree Holotomographic Imaging Systems

BIOspire was established to combine multimodal AI and live cell imaging to address clinical issues. Our technology introduces a novel hardware solution integrated into software. The hardware images living cells at nanometer scales, uncovering previously hidden cellular features. The software tracks patients' health data, predicts potential outcomes and facilitates proactive treatments. Together, the hardware and software redefine the clinical experience, merging advanced cell imaging with insightful software for enhanced fertility care insight.

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Prof. Dr. Oliver Hayden
Sarah Wali
Katharina Thöne
Azur Causevic
Henning Sabersky-Müssigbrodt

Technical University of Munich, School of Computation, Information and Technology TranslaTUM

BugSense - A paper-based test to detect antimicrobial resistance in urinary tract infections for near-patient applications

Roughly one-third of all infections are urinary tract infections, primarily affecting women, the elderly, and diabetics. Diagnosis requires a multi-day process in a central laboratory - time that is not available for quick therapy decisions. BugSense (www.bugsensedx.com/) is a paper-based and industrially scalable solution that allows for decentralized testing of pathogens, including resistance testing, through automated image analysis. The team led by Sarah Wali is developing and validating this technology in collaboration with Prof. Oliver Hayden (TUM) at TranslaTUM, to expedite therapy decisions sustainably, thereby simplifying patient logistics.

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Stefan Schrüfer
Ruben G. Scheuring
Janik Altenhöfer
Alexander Björk

FAU Erlangen-Nürnberg Chair of Polymer Materials

RevoBITs - Analyze. Optimize. Automize

RevoBITs is developing the first smart bioprinter to enable medical research and the pharmaceutical industry to establish and reliably produce meaningful human tissue models. With a new print head technology and integrated quality control, RevoBITs offers the technological basis to reduce animal testing in drug discovery and to provide tissue for transplantation medicine in the long term. www.revo-bits.com

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Prof. Dr. Ulrike Protzer
Dr. Marian Wiegand
Prof. Dr. Percy Knolle
Dr. Frank Thiele

Helmholtz Munich

TherVacB - Spin-off to establish a therapeutic hepatitis B vaccine for an HBV cure

With nearly 300 million people affected worldwide and 820,000 deaths annually, chronic hepatitis B is a global health problem for which no curative therapy exists. TherVacB represents a promising therapeutic hepatitis B vaccine that is able to reactivate antiviral immune responses. TherVacB's efficacy to cure chronic infection has been demonstrated in preclinical models; first clinical trials will start soon. With the help of the m^4 Award, essential development steps for a final formulation of TherVacB will be carried out, and a spin-off company's foundation will be prepared to drive further clinical development.

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Dr. Kamyar Hadian
Juliane Tschuck

Helmholtz Munich

TUBiRA - Lead Optimization of first-in-class TRAF6-Ubc13 inhibitors for treatment of Rheumatoid Arthritis

Treatment of rheumatoid arthritis (RA) relies on interfering with immune cell signaling. This project, led by Dr. Kamyar Hadian, is targeting TRAF6-UBC13-mediated signaling to develop RA therapeutics. First-in-class TRAF6-UBC13 inhibitors have been developed that improve disease outcome in a preclinical RA mouse model. In this m^4-Award-funded project, the current lead molecules will be optimized to nominate preclinical candidates. This will enable the creation of a spin-off company dedicated to advancing these molecules from preclinical to clinical proof-of-concept for the treatment of rheumatoid arthritis.

For the individual research projects at the various Bavarian research sites, please contact the respective press offices.

Photo material:

Winning group photo as well as individual winner photos upon request or from 10/25/2023, 10 am, via download at https://www.bio-m.org//m4award2023_photos

About Bio^M

Since 25 years, Bio^M has been the networking organization for the biotechnology industry in Munich and Bavaria, acting on behalf of the Bavarian Ministry of Economic Affairs. Bio^M supports the Bavarian biotechnology and pharmaceutical industry with an extensive network in establishing new business contacts. The cluster management offers interested parties from Germany and abroad central access and a wide range of information about the industry. Especially for prospective company founders, Bio^M offers comprehensive advice and specialized coaching, training and mentoring programs. In addition,

Bio^M is going to open its physical incubator MAxL (Munich Accelerator Life Sciences & Medicine) for pre-seed projects and early-stage start-ups in biotech and healthtech in 2024. Since 2011, Bio^M has coordinated the m^4 Award pre-founding competition in the field of biomedicine, which is sponsored by the Bavarian Ministry of Economic Affairs. Bio^M also organizes a wide range of training courses, events and network meetings. More information under: www.bio-m.org